switched and circuit switched, but the existence of more than two access domains does not impede the invention being applied thereto,

[0155] usable communication networks, stations and transmission nodes may be or comprise any device, apparatus, unit or means by which a station, entity or other user equipment may connect to and/or utilize services offered by the access network; such services include, among others, data and/or (audio-) visual communication, data download etc.;

[0156] a user equipment or communication network element (station) may be any device, apparatus, unit or means by which a system user or subscriber may experience services from an access network, such as a mobile phone or smart phone, a personal digital assistant PDA, or computer, or a device having a corresponding functionality, such as a modem chipset, a chip, a module etc., which can also be part of a UE or attached as a separate element to a UE, or the like;

[0157] method steps likely to be implemented as software code portions and being run using a processor at a network element or terminal (as examples of devices, apparatuses and/or modules thereof, or as examples of entities including apparatuses and/or modules therefore), are software code independent and can be specified using any known or future developed programming language as long as the functionality defined by the method steps is preserved;

[0158] generally, any method step is suitable to be implemented as software or by hardware without changing the idea of the invention in terms of the functionality implemented;

[0159] method steps and/or devices, units or means likely to be implemented as hardware components at the above-defined apparatuses, or any module(s) thereof, (e.g., devices carrying out the functions of the apparatuses according to the embodiments as described above, eNode-B etc. as described above) are hardware independent and can be implemented using any known or future developed hardware technology or any hybrids of these, such as MOS (Metal Oxide Semiconductor), CMOS (Complementary MOS), BiMOS (Bipolar MOS), BiCMOS (Bipolar CMOS), ECL (Emitter Coupled Logic), TTL (Transistor-Transistor Logic), etc., using for example ASIC (Application Specific IC (Integrated Circuit)) components, FPGA (Field-programmable Gate Arrays) components, CPLD (Complex Programmable Logic Device) components or DSP (Digital Signal Processor) components;

[0160] devices, units or means (e.g. the above-defined apparatuses, or any one of their respective means) can be implemented as individual devices, units or means, but this does not exclude that they are implemented in a distributed fashion throughout the system, as long as the functionality of the device, unit or means is preserved;

[0161] an apparatus may be represented by a semiconductor chip, a chipset, or a (hardware) module comprising such chip or chipset; this, however, does not exclude the possibility that a functionality of an apparatus or module, instead of being hardware implemented, be implemented as software in a (software) module such as a computer program or a computer program product comprising executable software code portions for execution/being run on a processor;

[0162] a device may be regarded as an apparatus or as an assembly of more than one apparatus, whether functionally in cooperation with each other or functionally independently of each other but in a same device housing, for example.

[0163] It is noted that the embodiments and examples described above are provided for illustrative purposes only and are in no way intended that the present invention is restricted thereto. Rather, it is the intention that all variations and modifications be included which fall within the spirit and scope of the appended claims.

1. An apparatus comprising

a first interface unit configured to provide connection to a first network,

a second interface unit configured to provide connection to a network node located in a second network, and

a processor configured to at least

carry out a gateway function between the first network and the second network,

receive a packet from the network node via the second interface unit, wherein the packet comprises a source address which topologically does not belong to the second network,

encapsulate the received packet in a new packet, and

send the new packet to the first network via the first interface unit.

2. The apparatus according to claim **1**, wherein the processor is configured to at least use an interface address of the second interface unit as the source address of the new packet.

3. The apparatus according to claim **1**, wherein the processor is configured to at least record a host route to the source address of the network node within the second network.

4. The apparatus according to claim **3**, wherein the processor is configured to at least

receive a packet from the first network destined to the network node via the first interface unit,

decapsulate the packet, and

route the decapsulated packet to the network node based on the recorded host route.

5. The apparatus according to claim **1**, wherein the processor is configured to record the destination address of the received packet of the network node.

6. The apparatus according to claim **1**, wherein the processor is configured to at least

create a destination address of the new packet by using a network prefix of the source address of the received packet and an interface identifier of a network control node of a network indicated by the network prefix of the source address.

7. The apparatus according to claim **6**, wherein the interface identifier of the network control node of the network indicated by the network prefix is a fixed interface identifier or is an interface identifier created cryptographically by using a secret known to the processor and the network control node.

8. The apparatus according to claim **1**, wherein the processor is configured to at least

create a destination address of the new packet by using the destination address of the received packet as the destination address of the new packet.

9. The apparatus according to claim **1**, wherein the processor is configured to at least perform encapsulating and sending only when predefined rules regarding the network node are met.

10. The apparatus according to claim **1**, wherein the processor is configured to at least detect whether the source address topologically does not belong to the second network by determining whether the network prefix of the source address differs from the network prefix of the second network.

11. An apparatus comprising

a first interface unit configured to provide connection to a first network,